<u>Amendments to the Specification</u>:

<u>Please delete the present Abstract and replace it with the following new paragraph</u>:

The present invention is directed generally toward the field of spectral analysis and, more particularly, toward an improved method of identifying unknown components of a mixture from a set of spectra collected from the mixture using a spectral library including potential candidates. For example, the present method is directed to identifying components of a mixture by the steps which comprise obtaining a set of spectral data for the mixture that defines a mixture data space; ranking a plurality of library spectra of known elements according to their angle of projection into the mixture data space; calculating a corrected correlation coefficient for each combination of the top y ranked library spectra; and selecting the combination having the highest corrected correlation coefficient, wherein the known elements of the selected combination are identified as the components of the mixture.